

This listing of claims will replace all prior versions of claims in the application.

Claim 108. (currently amended) A surgical device comprising:
a sensor element for detecting dynamic and static forces imparted on the device, wherein non-visual information relating to these forces is communicated to a user of the device and ~~wherein~~ the sensor element is capable of detecting a spatial relation of the device with the environment.

Claim 109. (new) The device of claim 108 wherein information relating to forces imparted on the device is amplified and then communicated to the user.

Claim 110. (new) The device of claim 108 wherein the non-visual information is tactile or auditory.

Claim 111. (new) The device of claim 108 wherein the sensor element transmits an electrical signal in response to forces imparted on the device.

Claim 112. (new) The device of claim 108 wherein the sensor element generates electrical signals based on forces imparted at a distal end of the device.

Claim 113. (new) The device of claim 108 wherein the device is adapted for a microsurgery procedure.

Claim 114. (new) The device of claim 108 wherein the device is adapted for an ophthalmic procedure.

Claim 115. (new) The device of claim 108 wherein the device is adapted for neurosurgery.

Claim 116. (new) The device of claim 108 wherein the device comprises a sensor element for sensing forces imparted along a substantial length of the device.

Claim 117. (new) The device of claim 108 wherein the sensor element generates a proportional signal in response to a force on the device, wherein the strength of the signal is proportional to the amount of force on the device.

Claim 118. (new) The device of claim 117 wherein the device further comprises an electronic controller for generating an output signal based on the proportional electrical signal.

Claim 119. (new) The device of claim 118 wherein the device further comprises an output transducer for receiving the output signal, wherein the output transducer produces a sensory signal proportional to the amount of force imparted on the device.

Claim 120. (new) The device of claim 119 further comprising an energy conducting apparatus for transmitting the output signal from the electronic controller to the output transducer

Claim 121. (new) The device of claim 119 wherein the output transducer is any one of a speaker, earphone or headphone.

Claim 122. (new) The device of claim 108 wherein the output transducer is an electromechanical transducer.

Claim 123. (new) The device of claim 122 wherein the electromechanical transducer is attached to a grip portion of the device.

Claim 124. (new) The device of claim 122 wherein the electromechanical transducer is attached to a medical practitioner that uses the device.

Claim 125. (new) The device of claim 108 further comprising a mechanism that transmits electric signals from the sensor element to the electronic controller.

Claim 126. (new) The device of claim 108 further comprising a power source for the device.

Claim 127. (new) The device of claim 126 wherein the power source is connected to the device through an electrical cable.

Claim 128. (new) The device of claim 108 wherein the device comprises a battery.

Claim 129. (new) The device of claim 114 wherein the sensor element comprises a piezopolymer.

Claim 130. (new) The device of claim 129 wherein the piezopolymer generates an electric signal when flexed that is proportional to the degree of flexion.

Claim 131. (new) The device of claim 108, wherein the device includes a shaft and the sensor element comprises a strain gauge contained within, or attached to, the shaft.

Claim 132. (new) The device of claim 118 wherein the electronic controller operates under control of a microprocessor.

Claim 133. (new) The device of claim 132 wherein the microprocessor provides an ability to adjust the sensitivity and threshold of operation of the device.

Claim 134. (new) The device of claim 108 wherein the surgical device is self-contained.

Claim 135. (new) The device of claim 108 wherein the device is adapted to be sterilized.

Claim 136. (new) The device of claim 108 wherein one or more parts of the device are modular.

Claim 137. (new) The device of claim 136 wherein the one or more parts are disposable.

Claim 138. (new) The device of claim 136 wherein the one or more parts are reuseable.

Claim 139. (new) The device of claim 108 wherein the device interacts with an environment and senses impedance or magnetic flux in the environment.

Claim 140. (new) The device of claim 108 wherein the device senses proximity and/or contact with a tissue.

Claim 141. (new) The device of claim 108 wherein the device comprises a shaft having a distal end and a handle and wherein the sensor is placed between the shaft and the handle.

Claim 142. (new) The device of claim 141 wherein the handle is rigid.

Claim 143. (new) The device of claim 108 wherein the device comprises a shaft and the sensor is imbedded within the shaft.

Claim 144. (new) The device of claim 108 wherein the device comprises a disposable tip.

Claim 145. (new) A method of performing a medical procedure, comprising bringing a device according to claim 108 into proximity with a tissue and sensing static and/or dynamic forces on the device.

Claim 146. (new) The method of claim 145 further comprising the step of guiding the device based on non-visual information received in response to the sensing.

Claim 147. (new) The method of claim 145 or 146 further comprising manipulating the tissue of a patient with the device.

Claim 148. (new) The method of claim 145 wherein the tissue is neurological tissue.

Claim 149. (new) The method of claim 145 wherein the tissue of a patient's eye is manipulated.

Claim 150. (new) The method of claim 145 wherein the medical procedure is a surgical procedure.

Claim 151. (new) The method of claim 145 or 146 wherein non-visual information is transmitted in real time to a user of the device.

Claim 152. (new) The method of claim 145 wherein non-visual information which is tactile and/or auditory is transmitted to a user of the device.

Claim 153. (new) The method of claim 145 where signals corresponding to forces on the device are amplified and communicated to a device user.

Claim 154. (new) The method of claim 153 wherein the signals are electrical signals.

Claim 155. (new) A kit comprising a device of claim 108 packaged in a sterile form.